

U.S. Serial No. 10/613,689
 Filed: July 3, 2003
 AMENDMENT AND RESPONSE

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

List of Claims:

1. (Currently Amended) Apparatus for placing packaging material in a pre-determined position relative to an array of articles, comprising a conveyor for conveying an array of articles, feed means for feeding the packaging material from ||a|| an upstream direction of travel substantially perpendicular to the direction of travel of the articles, wherein the feed means accelerates the packaging material to a sufficient velocity relative to the velocity of the articles such that the packaging material is placed in said pre-determined position whilst continuous forward motion of the articles is maintained.
2. (Original) Apparatus according to claim 1 wherein the feed means is fixed relative the article conveyor.
3. (Original) Apparatus according to claim 1 wherein synchronising means is provided to ensure that placing of the packaging material is synchronised with the motion of the article array through the device such that placement in the pre-determined position is achieved.

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4. (Original) Apparatus according to claim 3 wherein the synchronising means comprises a controller, the controller being arranged to control drive means for the feed means and/or drive means for the article conveyor.
5. (Original) Apparatus according to claim 1 wherein the feed means comprises an endless belt having provided thereon means for engaging the packaging material.
6. (Original) Apparatus according to claim 5 wherein the engaging means comprises a lug.
7. (Original) Apparatus according to claim 1 further comprising pick up means arranged to pick the packaging material from a conveyor up-stream thereof and to transfer it to the feed means.
8. (Original) Apparatus according to claim 1 wherein the packaging material comprises an insert to be placed between adjacent articles.
9. (Original) Apparatus according to claim 1 wherein the packaging material is a carton to be placed around the array of articles.

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10. (Currently Amended) A packaging machine comprising a packaging material feed chain comprising in series a material hopper, a feeder mechanism for transferring the articles from the hopper, apparatus for placing the packaging material in a pre-determined position relative to an array of articles, comprising a conveyor for conveying an array of articles, feed means for feeding the packaging material from ~~[[a]]~~ an upstream direction of travel substantially perpendicular to the direction of travel of the articles, wherein the feed means accelerates the packaging material to a sufficient velocity relative to the velocity of the articles such that the packaging material is placed in said pre-determined position whilst continuous forward motion of the articles is maintained.

11. (Original) A packaging machine according to claim 10 further comprising a station for erecting the packaging material prior transfer to the placement apparatus.

12. (Original) A packaging machine according to claim 10 further comprising a compression station for bringing the packaging material to a final position with respect to the articles.

13. (Original) A packaging machine as claimed in claim 10 further comprising a controller comprising a central processor, manual input means, and separate means controlled by the central processor for synchronising the positioning of the packaging material with respect to the articles.

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14. (Original) A packaging machine as claimed in claim 13 wherein the controller sets the relative positions of the articles and the packaging material at the in-feed end of the packaging machine.

15. (Original) A packaging machine as claimed in claim 13 wherein the controller controls a motor which drives the device for accelerating the material.

16. (Original) A packaging machine according to claim 13 wherein the controller controls the motors which drive the material feed, thereby synchronising the material flow rate with the article flow rate.

17. (Withdrawn) A method of placing packaging materials in a pre-determined position with respect to articles to be packaged comprising the steps of a) continuously feeding the articles to be packaged in a first direction; b) transferring a packaging material from an infeed to a packaging material loading station; c) accelerating the material in a direction perpendicular to the first direction to a sufficient velocity relative the articles; and d) placing the material in the pre-determined position relative the articles whilst continuous forward motion of the articles is maintained.

18. (Withdrawn) A controller for controlling the operation of the insert module of a packaging machine comprising the steps of: (i) moving the packaging material by a conveyor at a first velocity from an infeed to an insert loading mechanism; (ii) setting up the packaging material; (iii) transferring the packaging material from the conveyor to the

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insert lugs of the insert loading mechanism by synchronising the velocity insert lugs with the first velocity of the conveyor; (iv) changing the motion of the insert to a second velocity; (v) inserting the insert into the group of articles by synchronising the position and/or velocity of the articles with the position and/or velocity of the insert.